Patterson, Leslie

From: Chan, Valerie <vchan@craworld.com>
Sent: Tuesday, January 13, 2015 1:11 PM
To: Renninger, Steven; Lauren.Foster@tetratech.com; Helm, Brandon; Patterson, Leslie; 'madelyn.smith@epa.state.oh.us'
Cc: "Ken Brown'; 'jrc@e-emi.com'; Wendell Barner; 'Heath, Bryan'; Loney, Adam; Gatrell, Douglas; Project Email Filing
Subject: Building 24 (Globe Equipment) 1-year hybrid proficiency sampling results ~COR-038443-62~
Attachments: Bldg 24 Globe Equipment Proficiency Results.xlsx; Bldg 24_SampleLocations_38443-62(PRES030)GN-WA001-figure 1_120514.pdf

Please find attached the validated hybrid proficiency sample results for Building 24 (Globe Equipment). The file includes the 30-day, 180-day, and 1-year proficiency, results as well as the results from the 2012 Vapor Intrusion (VI) investigations.

There was a slight exceedance of trichloroethene (TCE) in sub-slab (SS) Probe B during the 1-year sampling event, completed on December 5, 2014. TCE SS concentrations at Probe B were greater than the ODH screening level during the 2012 VI investigation but there were no SS exceedances of TCE measured during the 30-day and 180-day proficiency sample events completed in September 2013 and February 2014, respectively. However, as noted below, location SS-24-B was inaccessible in February 2014, so location SS-24-C was sampled during that event. A summary of the TCE SS data for location SS-24-B TCE is provided below.

Parameter	Concentration (ppb)						ODH SS Screening Level (ppb)
Date	Jan. 2012	Mar. 2012	Aug. 2012	Sept. 2013	Feb. 2014	December 2014	
Sample Event	2012 VI Investigation			30-day proficiency	180-day proficiency	1-year proficiency	
Trichloroethene (TCE)	**37**	**30**	**48**	6.5 / 7.1	Inaccessible (SS-24-C sampled= 1.1 ppb)	**22 / 21**	20

Notes:
Bold – Concentration was greater than applicable criteria

The following table presents the vacuum readings from the compliance and extraction points, measured in August 2013 and on December 4, 2014, prior to the 30-day and 1-year proficiency sample events, respectively. The vacuum at SS-24B decreased and is less than the acceptable threshold of -0.004"w.c, as are the vacuums at six other compliance points. The vacuum at extraction points EP-2, EP-4, EP-6, and EP-8 also decreased during this time, while the vacuum at EP-3 and EP-7 increased.

August 21, 2013	December 4, 2014
SS-24A: no measurement	SS-24A: -0.0841
SS-24B: -0.00092	SS-24B: -0.00068
SS-24C: -0.00007	SS-24C: -0.00052
SS-24D: -0.00448	SS-24D: -0.00498
SS-24E: -0.0383	SS-24E: - 0.0167
SS-24F: -0.0356	SS-24F: -0.0279
SS-24G: -0.00123	SS-24G: -0.00245
SS-24H: -0.00420	SS-24H: -0.00854

SS-24I: inaccessible	SS-24I: Filled in with concrete
SS-24J: -0.00202	SS-24J: -0.00757
SS-24K: -0.00067	SS-24K: -0.00805
SS-24L: no measurement	SS-24L: -0.00115
SS-24-M: no measurement	SS-24M: -0.00048
SS-24N: -0.0345	SS-24N: -0.0354
SS-24P: -0.00085	SS-24P: cannot access
	SS-24Q: -0.00345
	SS-24R: -0.0201
EP-1: 3.75"w.c	EP-1: behind wall (from recent renovations)
EP-2: 0.75"w.c.	EP-2: 0.5" w.c.
EP-3: 2.00"w.c.	EP-3: 3.25"w.c.
EP-4: 4.00"w.c.	EP-4: 2.75"w.c.
EP-5: 4.00"w.c.	EP-5: 4.0"w.c.
EP-6: 2.25"w.c.	EP-6: 2.0"w.c.
EP-7: 3.75"w.c	EP-7: 4.0"w.c.
EP-8: 3.75"w.c.	EP-8: 3.5"w.c.

In accordance with the VI Mitigation Work Plan, the Respondents propose a Corrective Action Plan consisting of increasing the SSDS vacuum, and collecting confirmatory samples at SS-24B and IA-24B.

There was also an exceedance of tetrachloroethene (PCE) in indoor air near Probe B during the 1-year sampling event. This is the first indoor air exceedance of PCE measured in Building 24. PCE analytical results from December 2014 sampling event are provided below.

Parameter	Concentration (ppb)		ODH IA Screening Level (ppb)	ODH SS Screening Level (ppb)
Location	IA-24-B	SS-24-B		
Tetrachloroethene (PCE)	**41**	59 / 49	25	250

Notes:
Bold – Concentration was greater than applicable criteria

Background sources likely contributed to the IA PCE result, based on previously developed attenuation factors (see table below). As discussed in the Vapor Intrusion Investigation Summary Report (CRA, December 2012), CRA collected concurrent indoor air and sub-slab radon samples to calculated empirical sub-slab soil gas to indoor air attenuation factors (AF). The 0.69 ratio of the December 2014 IA to SS PCE concentration was significantly greater than the average attenuation factor for Building 24 of 0.00299. No compounds have been identified in indoor air at concentrations above screening criteria in previous sampling events, including the pre-remedial action sampling events. The IA concentration of PCE is likely not due to vapor intrusion.

Sample Location	Radon Concentration (pCi/L)	Attenuation Factor	Average Building Attenuation Factor
IA-24-A	1.13	0.00146	0.00299
SS-24-A	774		
IA-24-C	1.42	0.00167	

SS-24-C	852		
IA-24-D	6.3	0.00694	
SS-24-D	908		
IA-24-F	1.35	0.00187	
SS-24-F	723		

In accordance with the VI Mitigation Work Plan, the Respondents propose a Corrective Action Plan consisting of increasing the SSDS vacuum, and collecting confirmatory samples at SS-24B and IA-24B 30-days after the vacuum adjustment.

Valerie Chan, P. Eng.
Conestoga-Rovers & Associates (CRA)
651 Colby Drive
Waterloo, ON N2V 1C2

Phone: 519.884.0510
Fax: 519.884.0525
www.CRAworld.com

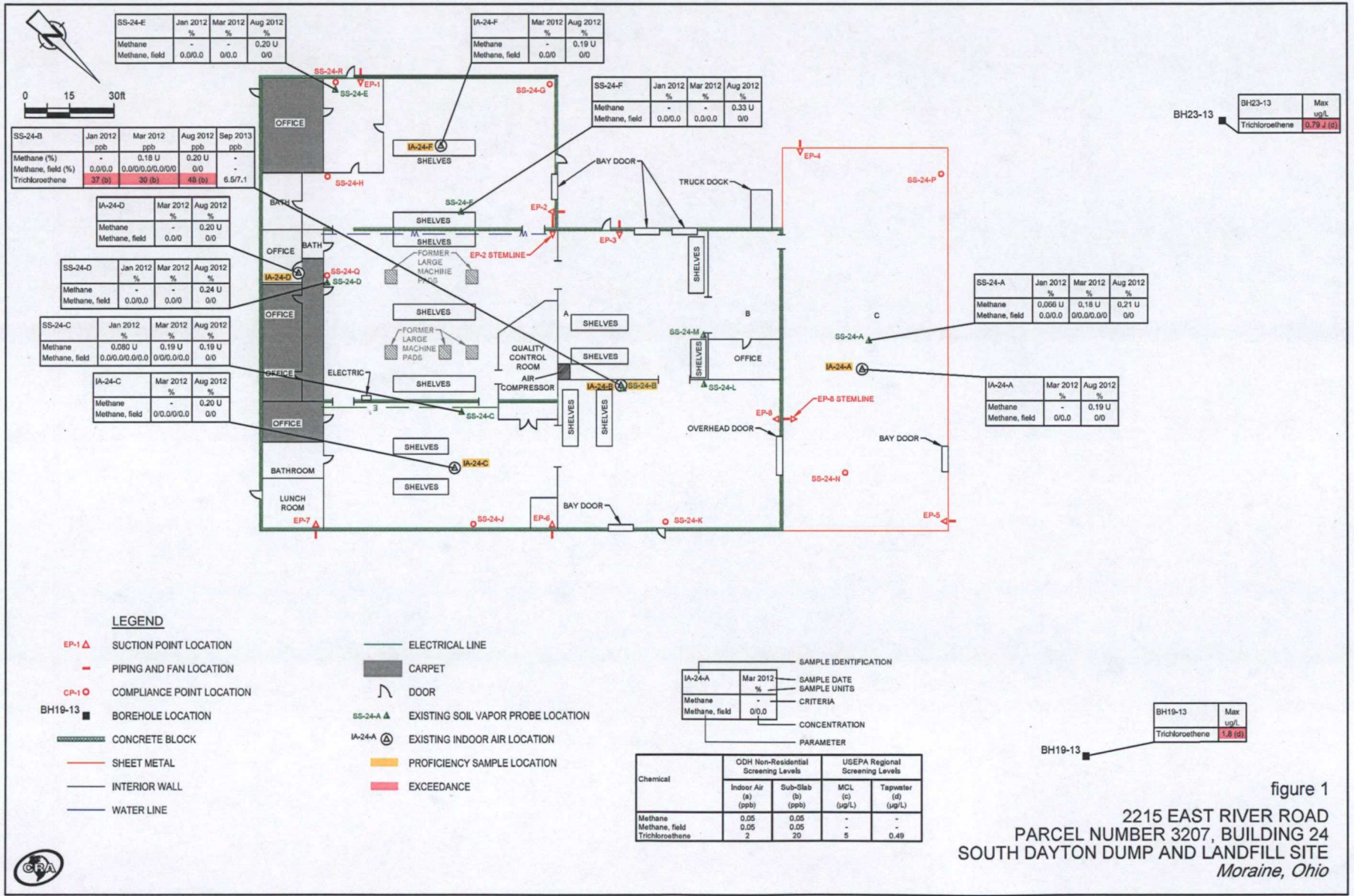

figure 1

2215 EAST RIVER ROAD
PARCEL NUMBER 3207, BUILDING 24
SOUTH DAYTON DUMP AND LANDFILL SITE
Moraine, Ohio

38443-62(PRES030)GN-WA001 DEC 5/2014